

Knowledge, Attitude and Practices towards Medical Research amongst the Postgraduate Students of Pravara Institute of Medical Sciences University of Central India

Purushottam A. Giri, Vidyadhar B. Bangal¹, Deepak B. Phalke

Departments of Community Medicine (PSM), ¹Obstetrics and Gynecology, Rural Medical College and Pravara Rural Hospital of Pravara Institute of Medical Sciences, Deemed University, Loni, Maharashtra, India

ABSTRACT

Background: Health research training is an essential component of medical education and a vital exercise to help develop physician research skills. **Objectives:** This study was carried out to assess the knowledge, attitude, and practices towards health research amongst the postgraduate students of Pravara Institute of Medical Sciences University of central India. **Materials and Methods:** A cross-sectional study was carried out from August to October 2012. A total of 116 postgraduate students were interviewed. Knowledge, attitude, and practices related to health research were assessed using a predesigned, pretested and validated questionnaire. Results were analyzed in the form of percentage and proportions whenever appropriate. **Results:** In present study, the concept of research hypothesis was known to only 18.9% of the postgraduate students, whereas 17.2 and 21.5% students knew the full form of MEDLARS and MEDLINE respectively. Majority (91.4%) students believed that patient outcome improves with continued medical research and 70.7% are willing to participate in workshop for research methodology. Lack of time due to vast curriculum of postgraduate subjects (59.5%), lack of research curriculum (25%), and inadequate facilities (25.8%) were stated as major obstacles for pursuing research. **Conclusion:** Postgraduate students have inadequate knowledge, but have positive attitudes towards health research. Postgraduate training and research facilities at the institution need to undergo major transformation in order to encourage meaningful research by postgraduate trainees.

Keywords: Knowledge, medical research, postgraduate students, practice

Introduction

Research experience is invaluable to the physician's evidence-based practice as it imparts skills such as literature search, collecting, and analyzing data and critical appraisal of evidence.^[1] Training for research skills and experience of research early in career has been associated with continued professional academic work and may help inform residents' career decisions.^[2] The medical education system in India does not incorporate research methodology as a part of the curriculum. It is seen that research programs in medical colleges get the lowest priority. There are a numbers of reasons, including lack of funding and manpower resources, responsible for the poor quality in research-oriented medical education.^[3] As per the Medical Council of India (MCI) requirements, postgraduate students have to carry out a

dissertation project as a part of their Doctor of Medicine/Master of Surgery (MD/MS) curriculum. It is a common observation that a majority of postgraduate students conduct research projects during the 2nd or 3rd years of residency.^[4] In order to encourage research orientation in postgraduate students, currently MCI has made it mandatory to not only attend one international/national conference, but also give an oral/poster presentation and send the article for publication.^[5] A review of literature showed that the data regarding knowledge, attitudes, and practices toward medical research among postgraduate students pursuing postgraduate studies in India is lacking. It is felt that the existing level of knowledge and awareness among the resident doctors who have already conducted/are conducting at least one research study for their dissertation should be evaluated. Hence, the present study was carried out to assess the research-related knowledge, attitude, and practices of postgraduate students of a medical college affiliated to Pravara Institute of Medical Sciences University of central India.

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Address for correspondence: Dr. Purushottam A. Giri,
Department of Community Medicine (PSM), Rural Medical College
of Pravara Institute of Medical Sciences (Deemed University),
Loni - 413 736, Maharashtra, India.
E-mail: drpgiri14@gmail.com

Materials and Methods

A cross-sectional study was carried out between August 2012 and October 2012 at Rural Medical College of Pravara Institute of Medical Sciences (Deemed University), Loni, Maharashtra, India. A total of 139 postgraduate students studying and working at Rural Medical College were asked to participate in the study. However, only 116 (83.5%) postgraduate students consented to participate. Hence, sample size was 116 students. A predesigned and pretested questionnaire was used in this study, based on the previous literature.^[6] The questionnaire was divided in three parts. The first part pertained to the demographic information of the postgraduate students like age, sex, marital status, year of postgraduation, and field of specialty. The second part had questions related to knowledge, attitude and practices about research methodology and it contained total 12 multiple choice and descriptive questions; four questions each on knowledge, attitude and practice component. The last third part of the questionnaire was related to the difficulties faced by the residents in conducting medical research. The ethics committee of the institute had approved the study. All recorded data were entered in MS Excel and analyzed in the form of percentage and proportions whenever necessary.

Results

It was observed from Table 1 that among the study population, 59.5% respondents were males and 40.5% were females; and 51.7% were in the age group 26–28 years, followed by 29.4% in the age group > 29 years. Majority (79.3%) of postgraduate students belonged to clinical departments, while only 20.7% from pre- and para-clinical departments. Among the study group, 31% students were in their 1st year of postgraduation, while 34.5% each were from 2nd and 3rd year.

Table 1: Demographic characteristics of the study population

Demographic characteristics	Number (n=116)	Percentage
Age (in years)		
23-25	22	18.9
26-28	60	51.7
>29	34	29.4
Gender		
Male	69	59.5
Female	47	40.5
Specialty		
Clinical	92	79.3
Pre-and para-clinical	24	20.7
Year of postgraduation		
First year	36	31.0
Second year	40	34.5
Third year	40	34.5
Marital status		
Married	36	31.1
Unmarried	80	68.9

Proportion of subjects with correct answer for each question on knowledge, attitude and practices questionnaire was shown in Table 2. Only 18.9% students knew the definition of research hypothesis, whereas 17.2 and 21.5% students knew the full form of MEDLARS and MEDLINE respectively. Majority (91.4%) students believed that patient outcome improves with continued medical research and 79.3% needed separate time to be allotted for their thesis projects. Sixty-one percent students had previous experience of research projects, whereas 31.1% had presented papers at the institute, national, or international levels; and 70.7% are willing to participate in workshop on research methodology.

As shown in Table 3, the major obstacles for pursuing research among postgraduate students were lack of time due to vast curriculum of postgraduate subjects (59.5%), lack of research curriculum (25%), and inadequate facilities (25.8%) for research.

Discussion

In the present study, out of 116 postgraduate students, 61.2% students had previous experience of research projects, whereas 31.1% had presented papers at the institute, national, or international levels and 70.7% were willing to participate in workshop on research methodology. Similar results were obtained in a study done in Madison, USA; in that study, out of 143 postgraduate students, 85% felt that research experience was desirable, 48% were interested in pursuing research during residency, and only 8% were active in research.^[7] However, two studies that were carried out in Canada and Pakistan reflected a contrasting attitude of postgraduate students that a majority of

Table 2: Assessment of knowledge, attitude and practices about medical research among study population

Questions	Yes (%)	No (%)
Questions on knowledge		
What is definition of research hypothesis?	22 (18.9)	94 (81.1)
What is the full form of MEDLINE?	25 (21.5)	91 (78.5)
What is the full form of MEDLARS?	20 (17.2)	96 (82.8)
From whom to seek approval for conducting clinical research using new drugs in India	45 (38.8)	71 (61.2)
Questions on attitude		
Should training for research methodology be made compulsory for postgraduate students?	74 (63.8)	42 (36.2)
Does patient outcome improve with continued medical research?	106 (91.4)	10 (8.6)
Do postgraduate students need guidance and supervision to conduct research project?	102 (87.9)	14 (12.1)
Should research time be allotted separately while planning postgraduate curriculum?	92 (79.3)	24 (20.7)
Questions on practices		
Are you willing to participate in workshop on research methodology?	82 (70.7)	34 (29.3)
Do you have publications in journals?	36 (31.1)	80 (68.9)
Have you presented poster or research paper in a conference?	56 (48.3)	60 (51.7)
Do you have experience of writing research paper?	71 (61.2)	45 (38.8)

MEDLINE: Medline, MEDLARRS: Medical literature analysis and retrieval system

Table 3: Reasons among postgraduate students for not conducting research

Reasons for not conducting research	Number (n=116)*	Percentage
Personal reasons		
Lack of interest	15	12.9
Lack of time due to vast curriculum of PG subjects	69	59.5
Inadequate facilities for research	30	25.8
Other personal commitments like marriage, family, etc.	17	14.6
Institutional reasons		
Lack of interest by the faculty/guide	19	16.4
Inadequate support by mentors/assistants	43	37.1
Lack of research curriculum	29	25.0
Inadequate financial support	48	41.4
Lack of time	14	12.1

*Multiple responses

time in residency should be spent learning the clinical aspects of their specialty and they were unwilling to sacrifice personal time for research.^[8,9] A study done by Sumi *et al.*,^[10] also revealed that most physicians (93.2%) wanted to attend lectures or seminars on one or more topics related to clinical research. Among respondents, 68% of physicians reported current participation in clinical research and 74% reported past participation in clinical research.

In the present study, postgraduate students reported significant barriers impeding research during residency, such as lack of time, inadequate guidance from teaching staff and financial support. Similar obstacles for research among residents have been reported in a study done by Khan *et al.*^[11] Another study done by Sumi *et al.*,^[10] also reported that too much of paperwork was the most frequently cited obstacle in conducting clinical research, followed by lack of time. Postgraduate students were interested to learn statistics, good clinical practices, medical ethics, and protocol writing. Hence, a research curriculum should be designed considering these aspects.

Conclusion

In the present study, it was found that postgraduate students had unsatisfactory knowledge of health research. They had positive attitude towards research, but they failed to transform their knowledge and attitude in actual practices due to lack of time and lack of research curriculum. There is need to encourage postgraduate students to carry out research through provision of technical assistance and essential infrastructure during their postgraduate training program.

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